

**Draft Meeting Minutes**  
**Beryllium Health and Safety Committee**  
**March 2-4, 1999**  
**Las Vegas, Nevada**

A meeting of the Beryllium Health and Safety Committee was held in Las Vegas, NV on March 2-4, 1999. The meeting agenda is appended as Attachment A. A list of attendees is appended as Attachment B. A list of discussion topics and associated notes is given below.

**1. Name Change**

The history of the "Beryllium Monitoring Committee" was discussed, including the origin of the committee as a subcommittee of the interagency Beryllium Coordinating Committee. In order to provide a more direct description of the mission of the committee, it was decided that the committee would now be called the "Beryllium Health and Safety Committee".

**2. Mission**

The committee mission was discussed and the following mission statement was developed:

The mission of the Beryllium Health and Safety Committee is to promote the safe use of beryllium and prevent chronic beryllium disease and other adverse health effects in the workplace. This will be accomplished by identifying and promoting:

- Best work practices,
- Needed research, and
- Technical standards and measures.

**3. BHSC Leadership Positions**

The following positions and responsibilities were adopted:

- Chair (organizes the meetings, sets the agenda)  
Steve Abeln
- Vice-Chair(s) (back up the chair)  
Kathryn Creek  
Tom Ford
- Secretary (take meeting notes for the chair, and maintain membership lists)  
George Fulton (primary)  
John McKenney

**4. BHSC Subcommittee Structure**

The meeting participants discussed ways to achieve the committee mission. It was decided that the former subcommittee structure (a health monitoring subcommittee and a workplace monitoring subcommittee) could be improved upon. It was decided to regroup the subcommittee responsibilities into three subcommittees as follows:

**CBD Prevention Committee (David Deubner)**

- How clean is clean (for public release)
- Provide comprehensive vision (manual) to prevent CBD at the worksite
- DOE rule review, (prudent practice vs mandates)
- Training practices review and updating
- Identifying and overcoming barriers
- Logic for presentations to upper management and other organizations
- Develop leading measures

#### **CBD Research Needs Committee (Mark Hoover)**

- Understanding the objectives of all research being conducted
- Developing a biomarker for exposure
- Updating the Lovelace beryllium bibliography
- Better screening methods for CBD
- Better understanding of the Dose Response
- Support animal research and genetic marker research
- Swipe samples

#### **CBD Technical Practices, Standards, and Measures (Mike Garcia)**

- Site review of CBDPP plans
- Answer questions from the web
- Web Site
- Diagnostic criteria for CBD prevention
- Maintaining Be worker records
- Organizational liaisons

### **5. List of Current Programs**

The committee began developing the following list of current programs of interest to the committee mission. We plan to expand the list and add the names, addresses, emails, and phone numbers of the program contacts.

- Realtime monitors (LIBS, MIPS, voltometry)
- Genetic markers (Rossman, Saltini, Albertini, NIOSH, Marrone)
- BW/NIOSH epidemiological study with particle size, particle characterization
- Improved methods for LPT
- Multiple site medical surveillance
- Physico/chemical solubility
- BISAC animal models
- CBD development markers for sensitization
- Cardiff data
- Brush Wellman work practices
- Speedring dragout study

- Reading/Hazelton former worker study
- Johns Hopkins former worker study
- Ed Fromme - statistical evaluation of LPT data
- Wayne Sanderson - Reading Cancer cohort study
- NIOSH study of beryllium contamination off-site (Sanderson)
- UCRD - task based characterization and particle size
- BISAC BLPT standard
- Subcontractor Site Characterization
- Maria training program
- DOE rule
- Lovelace Respiratory Research Institute studies
  - Aerosol characterization and model aerosols (Hoover)
  - Beryllium mouse model (Benson)
  - Beryllium dog, monkey, and rodent models (Finch)
  - Combined effects of beryllium and other aerosols (e.g. plutonium, smoking) (Finch)
- Johns Hopkins animal model
- National Jewish/Lovelace NIOSH project on the time course of CBD cases (Newman)

#### **6. Establishment of a BHSC Organization Liaison Program**

The committee decided that it would be useful to develop a formal liaison program with other organizations having an interest in the safe handling of beryllium. An organizational liaisons coordinator was selected, and a list of potential liaison organizations was prepared. The coordinator can expand the list and seek liaison appointees in coordination with the BHSC chair.

BHSC Organizational Liaisons Program - Monty Herr, Coordinator

DOE:

NIOSH:

BISAC: David Deubner

DoD:

NASA:

SERDP: Chuck Pellerin

AIHA

ACGIH

Beryllium Advisory Committee:

(medical, epi, some IH)

Other industry representatives

#### **7. BHSC Member Site Representatives**

It was decided to continue the practice of having a primary contact representative for each of the BHSC member sites. The Site Representatives are responsible for

coordinating the participation and notifications for individual facilities. The current list of site representatives is:

LANL - Kathryn Creek  
LLNL - George Fulton  
BW - Marc Kolan  
Y-12 - Tom Ford  
RF - Lee Ann Holwager  
SNL - John McKenney  
UK - AWE: Tony Quinn  
UK - JET: Bharat Patel  
ORAU: Duane Hilmas  
Pantex: Chris Cantwell  
Kansas City Plant: Bill Frede  
LRRI: Mark Hoover  
Speedring: Edwin Marcial  
StarMet: Frank Vumbaco  
DOE EH: Paul Wambach / David Weitzman  
DOE DP: Jim Slawski  
DOE AL: Mike Garcia  
DoD ? : Gil London  
DoD other: (check with Chuck Pellerin)

Other organizations:

Boeing: Mark Axelrod

#### **8. BSHC Core Committee Members**

At the November 1998 meeting in Los Alamos, the chair established the concept of a Core Committee, which would be made up of committee members who are qualified and willing to make substantial and continuing work contributions. Some members indicated a willingness to serve on the core committee at that time. And the chair now requests that individuals reaffirm (by email to [abeln@lanl.gov](mailto:abeln@lanl.gov)) their willingness and ability to serve on the core committee. Issues to be considered by the core committee include responses to standard and rule reviews, BHSC membership issues, priorities, and specific core committee member responsibilities and terms.

#### **9. Additional Discussion Issues**

##### **HOW TO CHANGE TO "LEADING" MEASURES RATHER AND "LAGGING" MEASURES**

- What needs to happen
- Focus on prevention
- Example: bi-monthly senior management walk-thrus for health and safety questioning
- Genetic susceptibility issues

##### **ACGIH PRESENTATION PLANS**

- Focus on what ACGIH covers
- Provide them with an improved dose-control strategy
- Help them become part of building a better mousetrap

-Which model for TLV during extended shifts?

## **STRATEGIES FOR LIMITING THE NUMBER OF EXPOSED WORKERS**

Including union issues

## **DEFINE HOW CLEAN IS CLEAN**

-Equipment and buildings

Risk-benefit method

Surface contamination management for controlling inhalation risks

## **SPECIFIC PLANS FOR IMPLEMENTING STEVE'S BHSC PATH FORWARD**

-Identify and monitor research

-Identify research priorities

An adequate animal model(s)

-Help coordinate funding

-Publish our work

-Continue round-robin

-Set up Website

-Continue our operational peer reviews

## **HOW TO IMPROVE INPUT FROM DOE**

-Is the research support adequate?

-What is the Office of Science doing?

-Possible approach through Paul Wambach, Paul Seligman, to Susan Rose

-Clear picture of current research

-Strategies for a committee position on funding needs

## **Be Rule Implementation Guide**

Wambach/Tuggle letter

Viet study

Kriess study

DWA (daily weighted average)

short term processes

Area samples for nonprocesses

1/4 year period average for each type of sample

baseline (8 h)

equivalent of TWA

quarterly, no upper/lower range, bias is to the low side

See the IRIS document for beryllium (for ambient air standard) for a risk-based value

Note that the qualifying statements in the Kreiss publications tend to be disregarded

PEL approach is that the PEL should not be exceeded. Therefore the ACGIH approach is not more protective.

Clarify status of international harmonization...

What do we think the roles are for noninhalation routes of sensitization?

Dermal, ingestion, blood absorption from the head airways

- Janet Torma-Krajeski has submitted a paper comparing fixed area and personal sampling
- UK approach was changed two years ago to treat Be with a MEL (maximum exposure limit) where exposures are kept as low as practicable. MELs apply to materials for which the medical consequences of exposure are unknown.

- 1981-1997, Cardiff data base, electronic form, stable work force, about 240 people, a few have died since leaving work, a death certificate study is proposed, all workers had exit physicals, up to 5 years ago there were annual chest xrays then they were discontinued because the value of annual chest xrays was considered low, exposure data was to be analyzed, and then an attempt to link exposure data with medical data, the LPT test was not considered reliable enough, all workers have a unique number, they tended to do the same jobs without a lot of moving around, therefore the workplace and lapel data and workers can be linked, there is an anomaly with the foundry workers because they wore respiratory protection, this is the "as is" situation and there has been no overt evidence of disease even though the LPT test has not been done.

**Attachment A**

**March 2-4, 1999 BMC Meeting Agenda**

**DOE Nevada Support Facility**

**Tuesday, March 2<sup>nd</sup>**

9:00-9:15      Welcome & Agenda

**Medical Updates**

9:15-9:45      Dr. Cragle (ORISE) – Y-12 Findings to date

9:45-10:15    Dr. Furman (ORISE) – Rocky Flats Medical Update/comments on medical part of proposed rule

10:15-10:45   Dr. Burastero (LLNL) – LLNL LPT Screening and survey of worker attitudes

10:45-11:00   Break

11:00-11:45   Marc Kolanz/Dr. Deubner (BW) – Status of joint Brush/NIOSH epidemiology studies at Tucson & Elmore Plants

**CBDPP Implementation & monitoring results**

11:45-12:15   Tom Ford (Y-12) – Methodology for Characterization of Legacy Areas at Y-12

12:15-12:45   Tom Ford (Y-12) – FY 1999 Monitoring Results

12:45-2:15    Lunch

2:15-2:45      Jim Jenkins (Y-12) – Lessons Learned: Compliance Assessment of Y-12 Operations

2:45-3:15      Charlene Edwards (Y-12) – Y-12 CBDPP Implementation, a Line Managers Perspective

3:15-3:30      Break

|           |  |
|-----------|--|
| 3:30-4:30 | Steve Abeln (LANL) – Historical review of the BMC, Charters, Organization, Subcommittees, Path Forward |
| 4:30-5:00 | Open Discussion, ACGIH Proposal  |



## **Wednesday, March 4<sup>th</sup>**

9:00-12:30 Working session, Vice-Chair, Secretary, Working Groups (Industrial Hygiene & Medical Monitoring), ACGIH Proposal, DOE Rule, Funding Identified Activities  
12:30-2:00 Lunch  
2:00-5:00 Working session, Vice-Chair, Secretary, Working Groups (Industrial Hygiene & Medical Monitoring), ACGIH Proposal, DOE Rule, Funding Identified Activities

## **Thursday, March 5<sup>th</sup>**

9:00-12:30 Working session, Working Groups (Industrial Hygiene & Medical Monitoring), ACGIH Proposal, DOE Rule, Funding Identified Activities  
12:30-2:00 Lunch  
2:00-5:00 Working session, Working Groups (Industrial Hygiene & Medical Monitoring), ACGIH Proposal, DOE Rule, Funding Identified Activities

**Attachment B**  
**List of Attendees**  
**Beryllium Health and Safety Committee**  
**March 2-4, 1999**  
**Las Vegas, NV**

|               |  |                |
|---------------|--|----------------|
| Steve Abeln   | 505-677-3954<br>Steve: did you mean it when<br>you put 505-672-9115 ?? | Abeln@lanl.gov |
| Kathryn Creek |  |                |
|               |  |                |
|               |  |                |

I ran out of time on this and will send you what we have so far.

Mark Hoover and John McKenney